WHAT IS CLAIMED IS:

1.   A method for verifying the identity of a target object, the method comprising:

collecting a three-dimensional image record for a target object, wherein the collected image record is in a native format;

converting the three dimensional image record to a dual-octree-format voxel data set;

identifying a target-object-characteristic reflected in the voxel data set; and

locating a matching image record in a plurality of stored image records, wherein the matching image record includes a characteristic matching the identified target-object characteristic.

2.   The method of claim 1, wherein collecting a three-dimensional image record comprises:

scanning a face.

3.   The method of claim 1, further comprising:

transferring the collected three-dimensional image record over a network.

4.   The method of claim 1, wherein collecting a three-dimensional image record comprises:

reading the three-dimensional image record from a data storage device.

5.   The method of claim 4, wherein reading the three-dimensional image record from a data storage device comprises:

reading the three dimensional image record from a smart card.

6.   The method of claim 1, further comprising:

collecting thermal data about the target object.

7.   The method of claim 6, further comprising:

matching the thermal data with the collected image record.

8.   A system for verifying the identity of a target object, the system comprising:

an image collection device configured to output an image record for the target object in a native format;

a data converter connected to the image collection device, the data converter configured to convert the image record from the native format to a voxel-based format;

a comparator connected to the data converter, the comparator configured to compare the voxel-based format of the image record against a stored voxel-based image record; and

an output device connected to the comparator, the output device configured to generate an output responsive to the comparator matching the voxel-based format of the image record against the stored voxel-based image record.

9.   The system of claim 8, wherein the image collection device comprises:

a three-dimensional laser scanner.

10.   The system of claim 8, wherein the data converter is configured to convert the image record from the native format to a dual octree format.

11.   The system of claim 8, wherein the image collection device comprises:

a thermal imaging device.

12.   A system for verifying the identity of a target object, the system comprising:

an image collection device configured to output a three dimensional image record

for the target object in a dual octree format;

a comparator connected to the image collection device, the comparator configured

to compare the dual octree format of the image record against a stored dual octree image

record; and

an output device connected to the comparator, the output device configured to

generate an output responsive to the comparator matching the dual octree format of the

image record against the stored dual octree image record.

13.   The system of claim 12, wherein the image collection device comprises:

a thermal imaging device.

14.   A system for verifying the identity of a target object, the system comprising:

an image collection device configured to collect a three-dimensional image record descriptive of a target object;

a data reader configured to read a baseline three-dimensional image record from a data storage device;

a comparator connected to the image collection device and the data reader, the comparator configured to compare the three-dimensional image record of the target object with the baseline three-dimensional image record; and

an output device connected to the comparator, the output device configured to generate an output responsive to the comparator matching the three-dimensional image record of the target object with the baseline three-dimensional image record.

15.   The system of claim 14, wherein the data reader comprises:

a smart card reader.

16.   The system of claim 14, wherein the baseline three-dimensional image record comprises:

a voxel data set.

17.   The system of claim 14, wherein the baseline three-dimensional image record comprises:

a dual octree.

18.   A system for verifying the identity of a target object, the system comprising:

a data reader configured to read a baseline three-dimensional image record from a data storage device;

a comparator connected to the data reader and connectable to a image collection device, the comparator configured to compare a three-dimensional image record collected by the image collection device with the baseline three-dimensional image record; and

an output device connected to the comparator, the output device configured to generate an output responsive to the comparator matching the target object's three-dimensional image record with the baseline three-dimensional image record.

19.   The system of claim 18, wherein the baseline three-dimensional image record comprises:

a voxel data set.

20.   The system of claim 18, wherein the baseline three-dimensional image record comprises:

a dual octree.

21.   A method for verifying the identity of a target object, the method comprising:

receiving a three-dimensional image record for a target object, wherein the three-dimensional image record comprises a voxel data set;

identifying a first target object characteristic reflected in the image record; and

locating a matching image record in a plurality of stored image records, wherein the matching image record includes an object characteristic matching the identified first target object characteristic.

22.   The method of claim 21, wherein the voxel data set is arranged in a dual octree format.

23.   The method of claim 21, further comprising:

receiving a thermal image record for the target object; and

matching the thermal image record with the three-dimensional record.